

# FEDERAL UTILITY PARTNERSHIP WORKING GROUP SEMINAR

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**New Approach to Performance Assurance**  
(What We Did, How It Surprised Even Us, and How We're Being  
Surprised Again)

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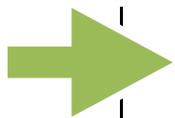
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The BIG Questions in the Energy World

How do we fund  
our energy  
improvements?

Very  
important to  
the  
Organization



Where do we find  
the no-cost  
improvements that  
everyone talks  
about?

How do we ensure the  
continued (good)  
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energy upgrades?



Very  
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the  
ESCO/Utility

UESC/ESPC

# Close Look at ISO 50001 Energy Management Systems

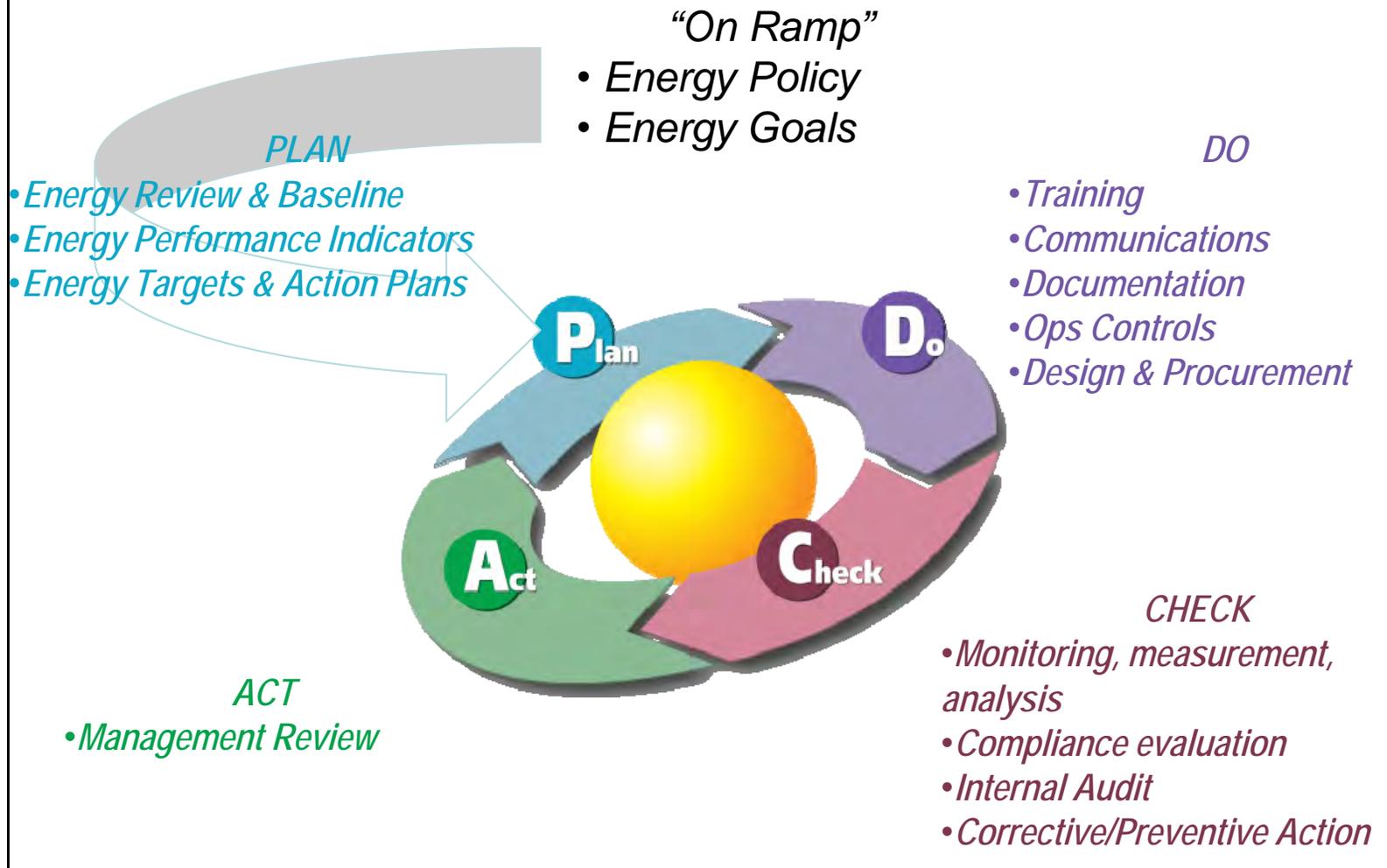


## Three Goals of an EnMS:

Credible energy savings

Continuous EnMS improvement

Persistence



## The Fundamental Management Dynamic

FUNCTION	REPORTS?	GETS ATTENTION?
Finance	✓	✓
Sales	✓	✓
Production	✓	✓
HR	✓	✓
Infrastructure	✓	✓
Energy	?	?

ISO 50001 requires energy reporting to top management.

How do we ensure the continued (good) performance of our energy upgrades?

THREAT	ISO 50001 THREAT RESPONSE
Poorly trained operators	Operator competency requirements Operational Controls
Poor maintenance	Maintenance personnel competency requirements
Change of organizational focus	Require energy reporting
Unrelated energy-intensive changes to operation	Normalized energy baseline
Energy manager retires or moves on	Persistent organizational accountabilities

Where do we find  
the no-cost  
improvements that  
everyone talks  
about?

ENERGY AWARENESS STRATEGY	TYPICAL ENERGY PROGRAM	ISO 50001
Energy Communications	✓	✓
Suggestion System		✓
Energy Awareness Training		✓
Operational Controls		✓
Design Reform		✓
Procurement Reform		✓

# What USAF-Honeywell-GSE Team Did





## What We Did:

- **First US Government ISO 50001 Certification**
- **First integrated ISO 50001/ESPC**
- **Aiming for no-cost/low-cost savings.**
- **Aiming for “persistent” energy program.**



**Proven Effective: First Federal Government ISO 50001 Certification!**  
**USAF Oklahoma City Air Logistics Complex – April 13, 2017**



### What We Did:

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- Aiming for no-cost/low-cost savings.
- Aiming for “persistent” energy program.

### How It Surprised Even Us:

- **Customer saw it as the ‘glue’ for the Government/Contractor team.**
- **Customer saw it as a ‘container’ for ESPC management.**

This  
was a  
surprise



## ***ISO 50001 & ESPC***



- **ISO 50001 provides sustained program structure**
  - ESPC can last up to 25 years.
  - Retaining certification is funded by ESPC & a source of organizational pride
  
- **ISO 50001 acts as “glue” for energy public private partnership**
  - Senior government leadership commitment
  - Energy awareness training for entire organization
  - Continuous government review of significant energy use & users
  - ISO 50001 formally tracks ESPC projects as part of the EnMS



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## How It Surprised Even Us:

- Customer saw it as the ‘glue’ for the Government/Contractor team.
- Customer saw it as a ‘container’ for ESPC management.
- **ESCO saw it as Performance Assurance**
  - **We believe this will be the case for UESCs as well.**

This  
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The ESCO appreciated the Performance Assurance:

“It’s the first one to get started and it gets people from the ground up working to save energy. It will be ongoing and something that continues on. It’s not a shot in the dark and forgets it tomorrow.”

-Bill Jackson, Honeywell PM

“We should have been doing something like this all along.”

-John Bethea, Honeywell Development Manager

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### How We’re Being Surprised Again:

- **Important role in energy resiliency efforts.**



This  
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surprise

Question from Tinker AFB Energy Team:

“Could we use ISO 50001 to drive adoption of energy resiliency somehow?”

Answer:

“Absolutely.”

# New Horizon : Energy Resiliency



ISO 50001 requires the identification of energy requirements.

REQUIREMENT: Air Force Energy Flight Plan 2017 – 2036

1. Improve Resiliency
  - 1.1 Identify vulnerabilities
  - 1.2 Optimize demand
  - 1.3 Assure supply

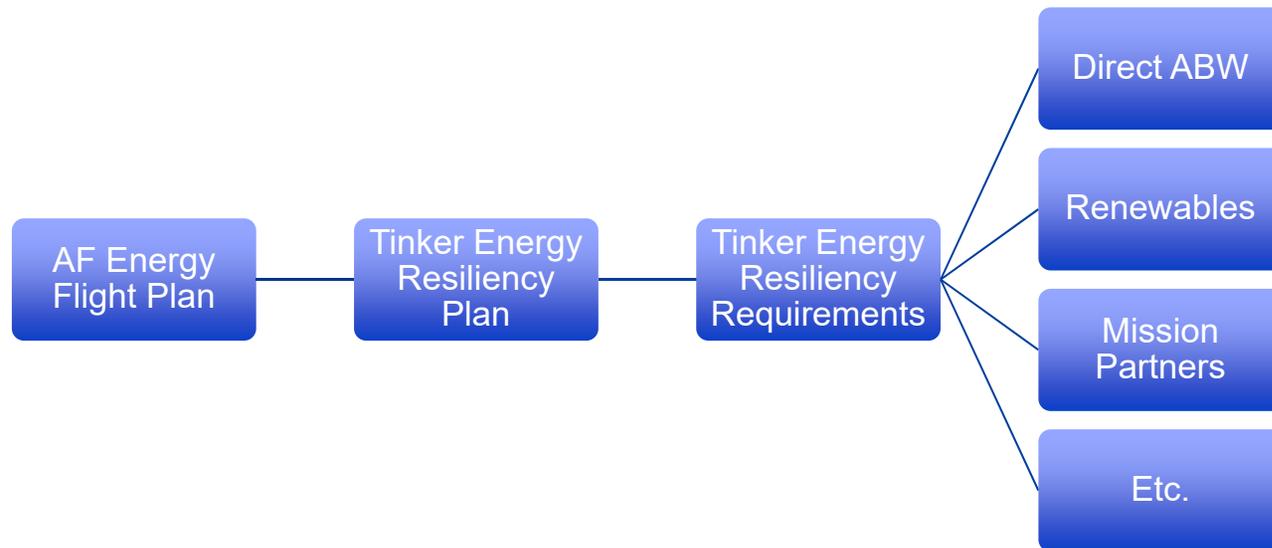


***If we declare the Air Force Energy Flight Plan a source of requirements, and if we can make those requirements “auditable,” then they will be part of the regular audits.***

***Audit reports go to Command.***

**This is the fundamental mechanism that can drive adoption.**

Now starting work with Tinker AFB Energy Team to formulate such an approach.



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### How We’re Being Surprised Again:

- Important role in energy resiliency efforts.



# ISO 50001 Implementation Insights



## What We've Learned 1/6

### 1. **ISO 50001 made workforce engagement more than a slogan.**

- Longstanding resistance became enthusiastic participation.
- Received ideas for energy performance improvement **EVEN ON NEW EQUIPMENT!**
- Suggestion system actually produces useable ideas.

## What We've Learned 2/6

### 2. ISO 50001 was more useful than we thought.

- Aiming for no-cost/low-cost savings.
- Aiming for “persistent” energy program.
- Aiming to piggy-back costs onto ESPC.
  
- Customer saw it as the ‘glue’ for the Government/Contractor ESPC team.
- Customer saw it as a ‘container’ for ESPC management.
  
- ESCO saw it as Performance Assurance
  - Workforce engagement supported ECMs.
  - We believe this will be the case for UESCs as well.
  
- Potentially important role in energy resiliency efforts.

## What We've Learned 3/6

### 3. Credentialed Implementation Support Ensures Technical Rigor

- DOE created the Certified Practitioner in Energy Management Systems (CP EnMS) credential to ensure a high professional standard for ISO 50001 implementation.
  - *Ensure technical rigor*
  - *Ensure comprehensive approach*
  - *Ensure the use of a thoroughly vetted methodology*
- Much of what the OC-ALC has been recognized for is the technical discipline the team brought to the effort.

## What We've Learned 4/6

### 4. Long Term EnMS Support Contract Fits Into Long Term ESPC/UESC

- Converts energy cost savings into manpower.
  - *Support ongoing EnMS activities.*
  - *Expand the EnMS.*
- Flexible 'level-of-effort' contract.

## What We've Learned 5/6

### 5. Auditing Is Critical to Performance & Productivity

- Keeps Energy Management from 'slipping off the desk.'
- Audit Report delivered to Commander
  - *Visibility to good & bad performers*
  - *Drive adoption & action*
- Certification is really helpful in this.
  - *Objective assessment of performance.*
  - *Gravitas*
- But, regardless, some kind of outside audit is needed.

## What We've Learned 6/6

### 6. Portfolio Thinking Can Make This Affordable

- Single Site EnMS for complex industrial sites
- Multi-site EnMS for less energy-intense sites
  - *Reduces management overhead*
  - *Reduces auditing requirements*
    - *Audit only square root of the # of sites each year*
- Portfolio reporting can roll up higher than local Command.

## **SUMMARY**

- **ISO 50001 is more than an ECM.**
  - **Valued as “glue” for the public-private energy team, or as the “container” for the energy performance contract.**
  - **Valued as Performance Assurance**
  - **Valued as a mechanism to drive adoption of resiliency requirements.**
  - **Yields a ‘persistent’ and comprehensive energy management structure**



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